

Half-Cell

ZPM430~455HH-60

Monocrystalline PV Modules



ZONERGY



21.1%
Module Efficiency



Multi Busbar Technology
Better light trapping and current collection to improve, Effectively improve the module's power output and reliability



Low Light Performance
The special solar cell technology has excellent low light power generation performance.



Adaptability To Harsh Environments
High performance materials are suitable for coastal, farm, desert and other harsh environmental conditions, glass surface is anti-reflective and easy to clean, minimizing power generation losses caused by dirt and dust.



Higher Output Power
Module output power increased to 505W

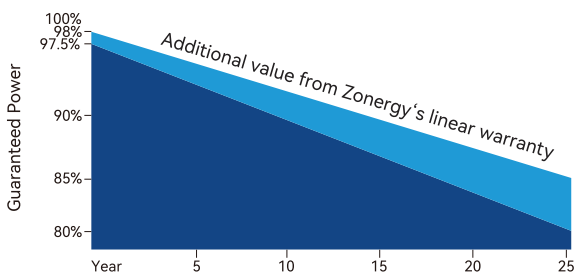


Better Resistance To Hot Spots
The use of half cell structure and special circuit design is less shade loss, with better temperature coefficient and thermal spot resistance ability



Fireproof Performance
Glass C

LINEAR PERFORMANCE WARRANTY



10 YEARS product warranty

25 YEARS linear power warranty



Electrical Data (STC)

Maximum Power (Pmax/W)	430	435	440	445	450	455
Open Circuit Voltage (Voc/V)	40.65	40.80	40.95	41.10	41.25	41.40
Short Circuit Current (Isc/A)	13.59	13.67	13.74	13.82	13.89	13.97
Voltage at Maximum Power (Vmp/V)	33.89	30.09	34.28	34.48	34.67	34.87
Current at Maximum Power (Imp/A)	12.69	12.77	12.84	12.91	12.98	13.05
Module Efficiency (%)	19.90	20.10	20.30	20.60	20.80	21.10
Operating Temperature	-40°C~+85°C					
Maximum System Voltage	DC 1500V (IEC)					
STC (Standard Testing Conditions): Irradiance 1000W/m ² , Cell Temperature 25°C, AM1.5						

Electrical Data (NMOT)

Maximum Power (Pmax/W)	327	330	333	336	340	343
Open Circuit Voltage (Voc/V)	38.15	38.28	38.40	38.53	38.65	38.77
Short Circuit Current (Isc/A)	10.91	10.95	10.99	11.03	11.08	11.12
Voltage at Maximum Power (Vmp/V)	31.89	32.05	32.19	32.35	32.51	32.67
Current at Maximum Power (Imp/A)	10.26	10.30	10.35	10.40	10.46	10.51
NMOT (Nominal Module Operating Temperature): Irradiance 800W/m ² , Ambient Temperature 20°C, AM1.5, Wind Speed 1m/s.						

Mechanical Data

Cell Type	182mm Mono
Cell Orientation	120(6*10)
Module Dimensions	1909×1134×35mm
Weight	23.9kg
Glass	3.2 mm Glass + EVA film + Back
Frame Material	Anodized Aluminum Alloy
Junction Box	IP68, three diodes
Cable	4mm ² , (+)300mm/(-)400mm

Temperature Coefficients

Temperature Coefficient (Pm)	-0.350%/°C
Temperature Coefficient (Voc)	-0.276%/°C
Temperature Coefficient (Isc)	0.046%/°C

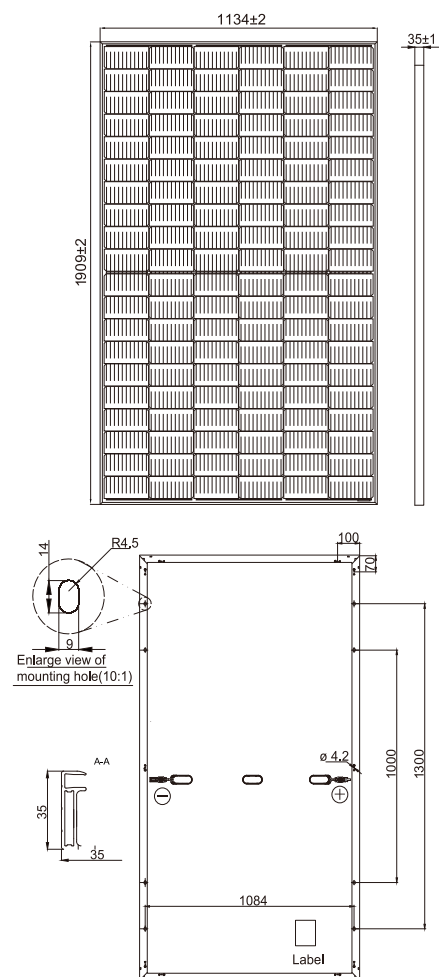
Operating Parameters

Maximum System Voltage	DC1500 (IEC)
Series Fuse Rating	25A
Operating Temperature	-40°C~+85°C
NMOT (Nominal Module Operating Temperature)	45±2°C

Packaging

Transportation methods	Number of modules per cabinet	Number of modules per pallet
40HQ container	744pcs	31pcs +31pcs

Module Dimensions (mm)



I-V Curve

